

## Grading of the Severity of Atopic Dermatitis

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A simple system for baseline grading the severity of atopic dermatitis in clinical work, is presented. The grading, which may be carried out on the basis of one single consultation, permits distinction between mild, moderate and severe atopic dermatitis by means of a score summation using the following parameters: 1) extent (by "rule of nine"), 2) course (via history) and 3) intensity (disturbance of night's sleep by itching). *Key words: Atopic dermatitis; Severity; Grading system.*

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In the literature the activity of the skin disease in patients with atopic dermatitis (AD) is estimated in rather different ways (1, 2, 3). In order to be able to compare results from different studies, it would be an advantage if a more uniform system was used for the definition of the severity of AD in clinical materials.

There are two major aspects of grading the disease activity in AD. The first one, which will be dealt with in this paper, is the distinction between patients with mild, moderate or severe disease activity, i.e. categorizing patients for clinical records. The second one concerns the recording of variations of disease activity, e.g. during a clinical trial of a new drug.

The aim of this paper was to work out simple criteria appropriate for clinical work, which could enable us to assess the severity of AD on the basis of a single consultation.

The present criteria for grading the severity of AD have been worked out on the basis of our earlier experience (4, 5, 6, 7) and discussion at a conference with invited experts, held at The 3rd International Symposium on Atopic Dermatitis (June 1, 1988 in Oslo) (Table I).

### COMMENTS

The patient's history during the last year should be considered in order to correctly evaluate the actual clinical state—which may be exceptionally good or bad.

The "rule of nine" division of the body surface,

widely used for classification of burn injuries, has been used as a practical way for estimating the extent of the dermatitis (Table II).

Due to a more widespread pattern of the dermatitis in infants than in older patients, other figures have been used to estimate the score for this parameter in infants.

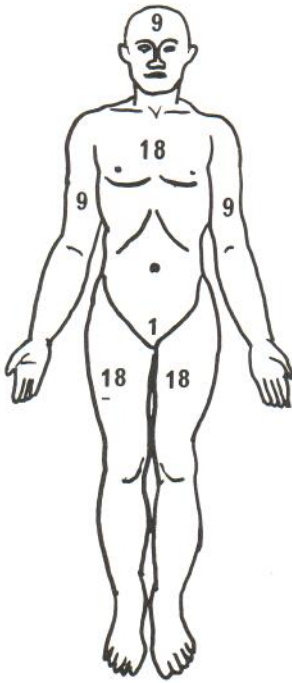
The course is judged according to the length of the remission periods. In infants or in cases where the

Table I. *Grading (severity) of atopic dermatitis*

I. <i>Extent</i>	
(a) Childhood and adult phase	
Less than approx. 9% of the body area	1
Involvement evaluated to be more than score 1, less than score 3	2
More than approx. 36% of the body area involved	3
(b) Infantile phase	
Less than approx. 18% of the skin involved	1
Involvement evaluated to be more than score 1, less than score 3	2
More than 54% of the skin involved	3
II. <i>Course</i>	
More than three months of remission during a year <sup>a</sup>	1
Less than 3 months remission during a year <sup>a</sup>	2
Continuous course	3
III. <i>Intensity</i>	
Mild itch, only exceptionally disturbing night's sleep	1
Itch, evaluated to be more than score 1, less than score 3	2
Severe itch, usually disturbing night's sleep	3
<i>Score summation</i>	
3-4 = mild	
4.5-7.5 = moderate	
8-9 = severe	

When doubt, score 1.5 or 2.5, may also be used.

<sup>a</sup> May be adjusted in infants or if onset was less than 1 year before grading.



disease first started less than one year ago, these criteria should be adapted to the actual period of disease.

Regarding the intensity of the disease, our approach is to use the itch as the parameter, as we consider this as the basic trait of AD, being the main complaint of patients with AD. According to our experience, the patient's complaints from itch will usually reflect the degree of the characteristic lesions of AD, such as scratch marks, prurigo papules and lichenification. Using the patient's experience of itch, instead of recording various types of skin lesions, permits an assessment of the score for intensity based upon the history. Recording various skin lesions in order to assess the score for the intensity of the dermatitis, would have required several consultations in periods with various activity of the dermatitis.

It has been proposed that diary cards could be used in order to get more precise information about the disturbance of night's sleep due to itch. This would probably be of some help, but a problem is that this will require a period of time before the grading can be performed.

Table II. Calculation ("rule of 9")

	Percentage
Head	9
Upper extremity	9
Body, anterior	18
Body, posterior	18
Lower extremity	18
Genital area	1

Obviously, the actual clinical state is influenced by several factors, for instance by therapy or intensive staphylococcal colonization of the skin (5). Since most patients are treated with various topical preparations, we find it most appropriate not to adjust the scores for topical therapy, whereas adjustment of scores should be done in severe cases where the activity of the disease is suppressed by oral steroids or intense photo/chemotherapy. Staphylococcal colonization, being present in most cases of severe AD (8), is considered as an aggravating factor for the development of AD. Therefore, adjustment of the scores seems not to be necessary with respect to the presence of this bacterium.

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